CLAIMS

What is claimed is:

1. A computer system comprising:

a graphics core; and

a unified graphics cache coupled to the graphics core, wherein the unified graphics cache stores texture data, color data and depth data.

2. The computer system of claim 1 wherein the graphics cache comprises:

a texture cache to store texture data; and

a color and depth buffer to store the color data and the depth data.

3. The computer system of claim 1 further comprising:

a central processing unit (CPU) core; and

a CPU cache coupled to the CPU core.

4. The computer system of claim 3 further comprising a bus interface coupled to the CPU cache and the graphics cache.

5. The computer system of claim 1 wherein the graphics core operates according to a tile-based rendering architecture.

6. The computer system of claim 1 further comprising a main memory coupled to the bus interface.

7. The computer system of claim 2 wherein the graphics core amplifies image polygons and renders the polygons into the graphics cache.

8. The computer system of claim 7 wherein the amplification of the image polygons are implemented via viewport transformation.

9. The computer system of claim 7 wherein the graphics core downsamples the image polygons after the polygons have been rendered.

10. The computer system of claim 9 wherein the downsampling of the image polygons are implemented by executing a bit aligned block transfer.

11. A method for supersampling an image comprising:

receiving polygons of a first tile of the image at a graphics core; and

rendering the polygons of the first tile into a unified graphics cache, wherein the unified graphics cache stores texture data, color data and depth data of the image.

12. The method of claim 11 further comprising amplifying the polygons after receiving polygons at the graphics core.

13. The method of claim 12 wherein the polygons are amplified four times the original size of the image.

14. The method of claim 12 wherein the amplification is achieved using viewport transformation.

15. The method of claim 11 wherein the process of rendering the polygons comprises:

setting up the image polygons; and

rasterizing pixels within the image polygons.

16. The method of claim 15 further comprising texturing the pixels within the image polygons.

17. The method of claim 11 further comprising downsampling the polygons after the polygons have been rendered.

18. The method of claim 17 wherein the downsampling is achieved by executing a bit aligned block transfer.

19. The method of claim 11 further comprising:

determining whether the unified graphics cache includes more tiles that are to be rendered; and

if so, receiving polygons of a second tile of the image at the graphics core; and

rendering the polygons of the second tile into the unified graphics cache.

20. A central processing unit (CPU) comprising:

a graphics accelerator; and

a unified graphics cache coupled to the graphics accelerator, wherein the unified graphics cache stores texture data, color data and depth data.

21. The CPU of claim 20 wherein the graphics cache comprises:

a texture cache to store texture data; and

a color and depth buffer to store the color data and the depth data.

22. The CPU of claim 20 further comprising:

a CPU core; and

a CPU cache coupled to the CPU core.

23. The CPU of claim 22 further comprising a bus interface coupled to the CPU cache and the graphics cache.

24. The CPU of claim 23 wherein the graphics accelerator operates according to a tile-based rendering architecture.